



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

D3454-7

Job Sheet 190425



Part No: D3454-7

Job Qty: 20 pcs

Part Name: Bushing



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/8/19

Job Tracking No:

Due Date: 3/12/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG-REV B IPP REV. A 05.11.17 New Issue EC IPP Rev:B 08-04-25 chg to revB DD verified by:EC

Ship Via:

## Bill of Materials

## Job Routing

| Op No | Operation                   | Qty    | Start Date | Due Date | Standard  |         | Workcenter/Supplier    |           | Sign-off    |
|-------|-----------------------------|--------|------------|----------|-----------|---------|------------------------|-----------|-------------|
|       |                             |        |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier  | Lead Time |             |
| 100   | Hardinge - 1                | 20 pcs |            | 3/12/19  | 0.00      | 1.32    | Hardinge - 1           |           | 180 19/3/15 |
| 120   | QC 8                        | 20 pcs |            | 3/12/19  | 0.00      | 0.00    | QC 8 - 12 23           |           | 7/19/03/12  |
|       |                             |        |            |          |           |         | QC 8 - 14              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 17              | DAS       |             |
|       |                             |        |            |          |           |         | QC 8 - 20              | 23        |             |
|       |                             |        |            |          |           |         | QC 8 - 25              | 9-89      |             |
|       |                             |        |            |          |           |         | QC 8 - 3               |           |             |
|       |                             |        |            |          |           |         | QC 8 - 32              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 33              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 35              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 39              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 4               |           |             |
|       |                             |        |            |          |           |         | QC 8 - 44              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 45              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 49              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 58              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 8               |           |             |
|       |                             |        |            |          |           |         | QC 8 - 9               |           |             |
|       |                             |        |            |          |           |         | QC 8 - 68              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 67              |           |             |
|       |                             |        |            |          |           |         | QC 8 - 47              |           |             |
| 150   | Packaging 3-1 - Stock - B4B | 20 pcs |            | 3/12/19  | 0.00      | 0.00    | Packaging 3 - 1 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 2 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 3 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 4 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 5 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 6 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 7 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 8 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 9 - B4B  |           |             |
|       |                             |        |            |          |           |         | Packaging 3 - 10 - B4B |           |             |

Plex 2/8/19 10:45 AM Dart.lajeunesse.marie

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sequence #:                                                                                                                       | QTY Affected :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | MRB (QSI042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QC / QA Coordinator    |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column; align-items: flex-start;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |



|                |        |         |           |  |                        |                    |
|----------------|--------|---------|-----------|--|------------------------|--------------------|
|                |        |         |           |  | Packaging 3 - 11 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 12 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 13 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 14 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 15 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 16 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 17 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 18 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 19 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 20 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 21 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 22 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 23 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 24 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 25 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 26 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 27 - B4B | 5036 8 MAR 12 2019 |
|                |        |         |           |  | Packaging 3 - 28 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 29 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 30 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 31 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 32 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 33 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 34 - B4B |                    |
|                |        |         |           |  | Packaging 3 - 35 - B4B |                    |
| 160 QC 21 - SA | 20 pcs | 3/12/19 | 0.00 0.00 |  | QC 21 - SA - 21        | MAR 19 03 12       |
|                |        |         |           |  | QC 21 - SA - 70        |                    |
|                |        |         |           |  | QC 21 - SA - 53        |                    |

Part Op 100 - 1-TURN AS PER FOLIO FA573 & DWG D3454 ,  
 Descriptions: 120 - (QC8- Inspect parts - second check)  
 150 - (Identify as per dwg & Stock Location: \_\_\_\_\_)  
 160 - (QC21- Final Inspection - Work Order Release)

## Job BOM

| Part / Item | Component Name      | Quantity             | Operation        | Container |
|-------------|---------------------|----------------------|------------------|-----------|
| M303R0.750  | 303 Round Bar 0.750 | 1.0520 ft (.0526 ea) | 100-Hardinge - 1 | 5119664   |

## Job Allocations

| Operation        | Component Part | Required | Inventory | Allocated |
|------------------|----------------|----------|-----------|-----------|
| 100-Hardinge - 1 | M303R0.750     | 1        | 76        | 0         |

## Part Specifications

| Spec No | Description | Target/Tolerance                  | Limits         | Type | Special Comments |
|---------|-------------|-----------------------------------|----------------|------|------------------|
| 1       | Bushing     | 0.250inches<br>+ 0.005<br>- 0.000 | 0.255<br>0.250 |      |                  |
| 2       | Bushing     | 0.372inches<br>+ 0.000<br>- 0.005 | 0.372<br>0.367 |      |                  |
| 3       | Bushing     | 0.343inches<br>+ 0.005<br>- 0.000 | 0.348<br>0.343 |      |                  |
| 4       | Bushing     | 0.060inches<br>+ 0.010<br>- 0.000 | 0.070<br>0.060 |      |                  |
| 5       | Bushing     | 0.750inches ± 0.030               | 0.780<br>0.720 |      |                  |

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Entered: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                         |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------|--------------------------|---------------|--------------------------|------------------------|--------------------------|----------|--------------------------|---------------------|--------------------------|---------------------|--------------------------|---------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------------|-------------------------------------------|-------------------------------------------|----------------------------------|------------------------------------------------|----------------------------------------|--------------------------------------------|-----------------------------------|------------------------------------|------------------------------------------|----------------------------------|---------------------------------|-----------------------------------------------|-------------------------------|---------------------------------|-------------------------------------------------------|----------------------------------------------------------|---------------------------------------------|--------------------------------------------|----------------------------------------|--------------------------------------|------------------------------------------|----------------------------------|-------------------------------------|---------------------------------------|-----------------------------------------|--|
| <p>Job: _____</p> <p>Part No. _____</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><b>DISPOSITION</b></p> <p>Rework _____</p> <p>Scrap _____</p> <p>Use-as-is _____</p> |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <p>Date : _____</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Sequence #: _____</p>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <p><b>Description Work Order Deviation</b></p> <div style="border: 1px solid black; height: 200px; margin-top: 10px;"></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                         |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <div style="display: flex; justify-content: space-around; align-items: center;"><div style="text-align: left;"><p><b>Container No: S159293</b></p><p><b>Part: D3454 - 7</b></p><p><b>Job No: 190425</b></p><p><b>Serial No/Batch: S159293</b></p><p>Revision: _____</p><p>Inspector: _____</p><p>Exp Date: _____</p><p>Instructions: Various STC's</p></div><div style="text-align: center;"><p><small>Dart Aerospace Ltd.<br/>1270 Aberdeen Street<br/>Newbury, ON K6A 1K7<br/>CANADA<br/>TEL: 1 813 892-5200<br/>FAX: 1 813 892-5201<br/>Email: sales@dartaero.com<br/>www.dartaerospace.com</small></p></div><div style="text-align: right;"><p>Date: 03/05/19</p></div></div> |                                                                                         |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <p><b>Root Cause</b></p> <table style="width: 100%;"><tr><td>Operator</td><td><input type="checkbox"/></td></tr><tr><td>Manufacturing Process</td><td><input type="checkbox"/></td></tr><tr><td>Equip/Tooling</td><td><input type="checkbox"/></td></tr><tr><td>Handling/Presservation</td><td><input type="checkbox"/></td></tr><tr><td>Material</td><td><input type="checkbox"/></td></tr><tr><td>Product Improvement</td><td><input type="checkbox"/></td></tr><tr><td>Process Improvement</td><td><input type="checkbox"/></td></tr><tr><td>Human Factors</td><td><input type="checkbox"/></td></tr></table>                                                                  | Operator                                                                                | <input type="checkbox"/>                    | Manufacturing Process                      | <input type="checkbox"/> | Equip/Tooling | <input type="checkbox"/> | Handling/Presservation | <input type="checkbox"/> | Material | <input type="checkbox"/> | Product Improvement | <input type="checkbox"/> | Process Improvement | <input type="checkbox"/> | Human Factors | <input type="checkbox"/> | <p><b>FAULT CATEGORY</b></p> <table style="width: 100%;"><tr><td><input type="checkbox"/> Pressure/Forced</td><td><input type="checkbox"/> Contamination</td><td><input type="checkbox"/> Power Loss/Surge</td><td><input type="checkbox"/> Positioned Wrong</td></tr><tr><td><input type="checkbox"/> Bending</td><td><input type="checkbox"/> Misaligned/off center</td><td><input type="checkbox"/> Folio/Program</td><td><input type="checkbox"/> Outside Tolerance</td></tr><tr><td><input type="checkbox"/> Crushing</td><td><input type="checkbox"/> BOM/Route</td><td><input type="checkbox"/> Grain Direction</td><td><input type="checkbox"/> Drawing</td></tr><tr><td><input type="checkbox"/> Cracks</td><td><input type="checkbox"/> Broken/Damage/Defect</td><td><input type="checkbox"/> Weld</td><td><input type="checkbox"/> Finish</td></tr><tr><td><input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist</td><td><input type="checkbox"/> Incomplete/Unclear Instructions</td><td><input type="checkbox"/> Wrong Stock Pulled</td><td><input type="checkbox"/> Part Lost/Missing</td></tr><tr><td><input type="checkbox"/> Marks/Chatter</td><td><input type="checkbox"/> Drill Holes</td><td><input type="checkbox"/> Out of Sequence</td><td><input type="checkbox"/> Misread</td></tr><tr><td><input type="checkbox"/> Mislabeled</td><td><input type="checkbox"/> Fit/Function</td><td><input type="checkbox"/> Off-set/Set-up</td><td></td></tr></table> <p>Other/Details: _____</p> | <input type="checkbox"/> Pressure/Forced | <input type="checkbox"/> Contamination | <input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Positioned Wrong | <input type="checkbox"/> Bending | <input type="checkbox"/> Misaligned/off center | <input type="checkbox"/> Folio/Program | <input type="checkbox"/> Outside Tolerance | <input type="checkbox"/> Crushing | <input type="checkbox"/> BOM/Route | <input type="checkbox"/> Grain Direction | <input type="checkbox"/> Drawing | <input type="checkbox"/> Cracks | <input type="checkbox"/> Broken/Damage/Defect | <input type="checkbox"/> Weld | <input type="checkbox"/> Finish | <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist | <input type="checkbox"/> Incomplete/Unclear Instructions | <input type="checkbox"/> Wrong Stock Pulled | <input type="checkbox"/> Part Lost/Missing | <input type="checkbox"/> Marks/Chatter | <input type="checkbox"/> Drill Holes | <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Misread | <input type="checkbox"/> Mislabeled | <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Off-set/Set-up |  |
| Operator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| Manufacturing Process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| Equip/Tooling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| Handling/Presservation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| Material                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| Product Improvement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| Process Improvement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| Human Factors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/>                                                                |                                             |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Pressure/Forced                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> Contamination                                                  | <input type="checkbox"/> Power Loss/Surge   | <input type="checkbox"/> Positioned Wrong  |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Bending                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> Misaligned/off center                                          | <input type="checkbox"/> Folio/Program      | <input type="checkbox"/> Outside Tolerance |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Crushing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <input type="checkbox"/> BOM/Route                                                      | <input type="checkbox"/> Grain Direction    | <input type="checkbox"/> Drawing           |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Cracks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> Broken/Damage/Defect                                           | <input type="checkbox"/> Weld               | <input type="checkbox"/> Finish            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> Incomplete/Unclear Instructions                                | <input type="checkbox"/> Wrong Stock Pulled | <input type="checkbox"/> Part Lost/Missing |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Marks/Chatter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/> Drill Holes                                                    | <input type="checkbox"/> Out of Sequence    | <input type="checkbox"/> Misread           |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Mislabeled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> Fit/Function                                                   | <input type="checkbox"/> Off-set/Set-up     |                                            |                          |               |                          |                        |                          |          |                          |                     |                          |                     |                          |               |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |